

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 23 JAN 2006

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Applicant's or agent's file reference	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/HR2004/000040	International filing date (day/month/year) 15.10.2004	Priority date (day/month/year) 16.10.2003	
International Patent Classification (IPC) or national classification and IPC F42C14/08, F42C15/44			
Applicant PERVAN, Boris			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 6 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 4 sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).			
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application			
Date of submission of the demand 02.05.2005		Date of completion of this report 24.01.2006	
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Menier, R Telephone No. +31 70 340-4405 	

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-7 as originally filed

Claims, Numbers

1-10 as amended (together with any statement) under Art. 19 PCT

Drawings, Sheets

1/6-6/6 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☒ the claims, Nos. 1
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-10
	No: Claims	
Inventive step (IS)	Yes: Claims	2-10
	No: Claims	1
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

- 1 The amended claims and the arguments sent by the applicant have been studied carefully. Nevertheless, the following objections remain:

The amendments of independent claim 1 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 19(2) PCT

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

- 2 Reference is made to the following documents:

D1: US3667387 A

D2: US3750427 A

- 3 The amendments filed with the International Bureau under Article 19(1) introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 19(2) PCT. The amendments concerned are the following:

- 3.1 The applicant has made the following amendments in independent claim 1:

3.1.1 the addition of the term "precisely", which is not derivable from the original disclosure.

3.1.2 the addition of the expression ", i.e. makes it inactive, sterile" which has no basis in the original disclosure.

3.1.3 the addition of the expression "and by that also the mine explosion after the adjusted time has expired" which has no basis in the original disclosure and furthermore, which is vague and unclear and leaves the reader in doubt as to the meaning of the technical features to which it refer, thereby rendering the

definition of the subject-matter of independent claim 1 unclear, Article 6 PCT.

- 3.2 These amendments introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 19(2).

Remark: Independent claim 1 will be examined without taking in consideration the amendments mentioned in point 3.1.

- 4 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

4.1 The document D1 is regarded as being the closest prior art to the subject-matter of independent claim 1, and discloses (the references in parentheses applying to this document) a supplement to mines by which the time period within which the activation of mines after their placing is possible, is limited (col.1, l.7-10), wherein the mentioned supplement limits the time period within which it is possible to activate the explosive material by which the mine is filled (col.2, l.54-61), where the duration of this time period can be adjusted (col.2, l.55-58) and it starts to run in the instant of setting initial parts (12) into the explosive material i.e. into the mine, in a way that in that instant, initial parts (12) comes in contact with the aggressive substance (14), which corrodes the walls of initial parts (12) and, when they are corroded through, then it comes in contact and mixes with the initial mixture by which initial parts (12) are filled, neutralizes it (col.1, l.54-61; col.2, l.9-69; fig.1,2).

4.2 The subject-matter of independent claim 1 therefore differs from this known supplement to mines in that the aggressive substance prevents the ignition of the initial mixture.

4.3 The problem to be solved by the present invention may therefore be regarded as decreasing the risk of accidents on people or animals.

4.4 Document D2 discloses a supplement to mines wherein a sterilizing liquid (26) will permanently sterilize or deactivate the explosive (20). In other terms, an aggressive

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(SEPARATE SHEET)**

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matter (26) will prevent the ignition of the initial mixture (20) (col.2, l.40-65; fig.1-3. This prevention of detonation is described in document D2 as providing the same advantages as in the present application. The skilled person would therefore regard it as a normal option to include this feature in the supplement to mines described in document D1 in order to solve the problem posed.

- 4.5 The solution proposed in independent claim 1 of the present application can therefore not be considered as involving an inventive step (Article 33(3) PCT).
- 5 The combination of the features of dependent claims 2-10 appears to be neither known from, nor rendered obvious by, the available prior art.

NEW PATENT CLAIMS

1. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible, **characterized by** that the mentioned supplement limits the time period within which it is possible to activate the explosive material by which the mine is filled, where the duration of this time period can be precisely adjusted and it starts to run in the instant of setting initial part (2) into the explosive material i.e. into the mine, in a way that in that instant initial part (2) comes in contact with the aggressive substance, which corrodes the walls of initial part (2) and, when they are corroded through, then it comes in contact and mixes with the initial mixture by which initial part (2) is filled, neutralizes it, i.e. makes it inactive, sterile and prevents its ignition, and by that also the mine explosion after the adjusted time has expired.
2. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible according to claim 1, **characterized by** that the supplement to mines in version A consists of: little pipe with sharp point (A) and cylindrical housing (B), which has in its lower part ampoule (C) filled with aggressive matter, and the upper wall of ampoule (C) is thinned by annular groove (C2), while at the lower side the ampoule is closed by disc shaped cover (C1); that the supplement to mines in version B consists of: initial part (2B) and cylindrical housing (D), which in its lower part has ampoule (D2) filled with aggressive matter, and the upper wall of the ampoule is thinned by annular groove (D3), while at the lower side the ampoule is closed by disc shaped cover (D1).
3. Supplement to mines by which the time period is limited within which the activating of mines after their placing is possible according to claim 2, **characterized by** that mentioned little pipe with sharp point (A) is put on initial part (2) and serves to brake the wall of ampoule (C) by its sharp point and that during the breaking of ampoule (C) it protects initial

part (2) that is sensitive to the pressure, it is of cylindrical shape, in the lower side made in pyramid form and with this sharp point it breaks ampoule (C), it is made of a material that is resistant to the corrosion by the aggressive matter filled in ampoule (C), on its upper end it has a hat shaped widening and by this hat it leans against mine activating mechanism (1), in its upper part it is made with the conical widening of the outer wall in a way that at the screwing-in of activating mechanism (1) the little pipe with sharp point enters into cylindrical housing (B) and by that the impermeability is ensured and the undesired leakage or evaporation of the aggressive matter spilt after the breaking of ampoule (C) is prevented, little pipe with sharp point (A) has on its body the bores through which the aggressive matter after the breaking of ampoule (C) enters into little pipe with sharp point (A), comes to initial part (2) and corrodes it walls.

4. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible according to claim 3, **characterized by** that mentioned cylindrical housing (B) serves for placing ampoule (C) and retaining the aggressive matter after the breaking of ampoule (C), it is made of a material resistant to the corrosion of the aggressive matter filled in ampoule (C), it is of cylindrical shape with a hat shaped widening on its upper part and by this hat it leans against the bore for the placement of activating mechanism (6) into which cylindrical housing (B) is placed, and, as its part, from the inner side the upper wall of ampoule (C) is made, which is thinned by annular groove (C2) for its easier breaking.

5. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible according to claim 4, **characterized by** that mentioned ampoule (C) is placed on the bottom of cylindrical housing (B) and made as its part, it serves for storing

60 the aggressive matter that after its breaking slowly corrodes the wall of initial part (2).

6. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible according to claim 2, **characterized by** that mentioned cover (C1) is placed at the lower side of cylindrical housing (B) and serves for closing cylindrical housing (B) after being filled with the aggressive matter.

7. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible according to claim 2, **characterized by** that mentioned initial part (2B) serves for storing the initial explosive and for breaking ampoule (D2), it is of cylindrical shape and at the lower side made in the form of a sharp point by which it breaks through ampoule (D2), it is made of a material that can be corroded through by the aggressive matter filled in ampoule (D2), it is part of the assembly of activating mechanism (1) and, when activating mechanism (1) is screwed into mine body (3), the sharp point of initial part (2B) is pointed into the upper wall of the ampoule and breaks it.

8. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible according to claim 2, **characterized by** that mentioned cylindrical housing (D) serves for placing ampoule (D2) and retaining the aggressive liquid after breaking ampoule (D2), it is placed in the mine in bore (6), it is made of a material resistant to the corrosion of the aggressive matter filled in ampoule (D2), it is of cylindrical shape with a hat shaped widening on its upper part, and by this hat it leans against bore (6) in mine body (3), and, as its part, at the inner side the upper wall of ampoule (D2) is made, which is for an easier breaking thinned by annular groove (D3).

9. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible according to claim 7, **characterized by** that mentioned ampoule (D2) is placed on the

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29.03.2005

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90 bottom of cylindrical housing (D), made as its part and serving for storing the aggressive matter that after its breaking corrodes the wall of initial part (2B).

10. Supplement to mines by which the time period is limited within which the activation of mines after their placing is possible according to claim 2, **characterized by** that mentioned cover (D1) is placed at the lower
95 side of cylindrical housing (D) and serves for closing cylindrical housing (D) after being filled with the aggressive matter.